

The Search for, Recovery, and Positive Identification of a Vietnam-Era U.S. Army Soldier

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ABSTRACT In Quang Nam Province, then South Vietnam, on August 26, 1971, a convoy of United States Army armored patrol cars was returning to base at the end of the day. A rocket-propelled grenade struck one of the vehicles, and subsequently five of the soldiers were killed in action (KIA) while one was missing in action (MIA). After-action reports from eyewitnesses to the event described the MIA soldier as "vaporized" and his remains as "completely destroyed" since he had been seated on boxes of claymore mines, and the vehicle was said to contain white phosphorous as well. Search efforts nonetheless ensued for the MIA beginning 2 days after the attack and finally ending 29 years later when a U.S. Army search and recovery element (RE) discovered dental remains and a dental prosthesis which were used to identify the soldier positively.

INTRODUCTION

On August 26, 1971, a U.S.-manned armored patrol car (APC) moving from a fire base to a night defensive position near Hoi An City, South Vietnam, was hit by enemy rocket-propelled grenade fire. This offensive action was assumed to have resulted in the deaths of all six soldiers aboard the vehicle. The body of one of the soldiers was not recovered. The incident resulted in the official listing of five KIA status soldiers and one MIA.

After-action reports from American eyewitnesses stated that the APC had exploded violently, as it was carrying various types of ammunition, including white phosphorous grenades and claymore mines. These U.S. witnesses suggested that the lost soldier's remains would likely never be found, as he was apparently completely disintegrated in the explosions and subsequent fire that burned for 11 hours after the incident. His last known location was described as "sitting atop boxes of claymore mines" within the APC. Search teams were sent to the site of the wreckage 2 days after the incident; however, no remains were found and no new information resulted (Figs. 1 and 2).

Background to Search Operations

Investigative elements (IE) researched the case in Vietnam during the years following the loss. In 1993, one local witness was contacted and interviewed with the assistance of the Vietnamese government. This witness, who will be referred to as witness 1, claimed to have participated in the initial burial of an American's remains in the vicinity of the particular incident. In addition to this information, he stated that he and his son subsequently disturbed the burial and reburied the remains in a location near to his house on an unspecified date in 1984, because he knew that the area was going to come under

cultivation soon. The IE located a secondary burial location near witness 1's house. These remains were determined to be most consistent with Mongoloid ancestry during the subsequent joint forensic review (JFR), which involved American and Vietnamese forensic experts. Thus, the remains were not repatriated.

A second IE interviewed witness 1 and four new witnesses (witnesses 2–5) in 1999. Witness 1 at this time was described by analysts as "unreliable" apparently because of his nervous behavior. One of the other four witnesses turned over a wrist-watch and a dog tag that was correlated directly to the MIA lost in the incident. Given this personal effect evidence that was obtained during this series of interviews, the IE recommended that a recovery element (RE) return the following year for a full-scale recovery operation.

The RE arrived in 2000 and established an excavation site with the assistance of witnesses 2–5. This location was purportedly the original burial location of the MIA soldier, a recently harvested rice field which was dry at the time (Fig. 3).

Witnesses 2–5 were reinterviewed before locating the site. Witness 1 was said to be "unavailable." Witnesses 2–5 all claimed to have buried the remains of an American in 1971, and all agreed on a 4.5 × 17.5-m area as the most likely location of the original burial of the American. When asked why this location was chosen, they replied that they had moved the body directly in line (west) from where the APC wreckage and a mortar crater had been located. They apparently remembered the exact location of the APC wreckage.

These men also agreed on the following points: that they had buried the American face down in a pre-existing 50-cm deep mortar crater, that the body was oriented in a northwest to southeast direction with the head directed to the northwest, and that the body was intact and relatively large in size. Witness 2 stated that only the top 20 cm of soil (plow zone) had been disturbed through the years of plowing. No heavy equipment, such as backhoes or bulldozers, had ever been used on these fields since the time of the incident. Witnesses 3–5 concurred with this assessment. All four witnesses

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FIGURE 1. Photo taken just before the incident by a medic in a nearby APC.

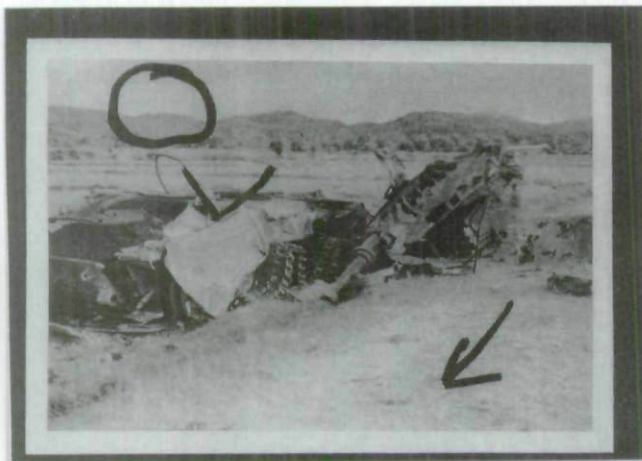


FIGURE 2. Photo taken by the same medic 2 days after the incident.



FIGURE 3. View of rice field, location of project area.

mentioned that they had heard that witness 1 had come to the field at a later date and dug up the remains.

Following the survey and interviews, the RE established a 17.5×4.5 -m rectangle encompassing the overall area indicated by witnesses 2–5 and targeted it for forensic excavation¹ (Fig. 4).

The team subdivided this area into seventeen 1×4.5 -m rectangular units. The units were oriented in a northeast to southwest direction so that the remains or evidence of a burial, which were said to be positioned in a northwest-southeast direction, would be encountered upon excavation (Fig. 5).

Trenches were excavated to a depth of approximately 30 cm. The soil was composed of a heavy clay, which made digging difficult, and dry screening even more so. Initially the team began digging the full 50-cm depth that the witnesses' had mentioned to be the depth of the mortar pit where they had placed the remains. Yet the slowness of the excavation progress led the team to adjust the method so that we stripped the initial plow zone layer off the underlying soil, then shovel skimmed the underlying layer (a dense clayey level), and inspected this flattened surface for signs of disturbance, which might indicate a burial feature. This method sped up the progress and seemed to allow us to inspect the soil in such a way as to account for past disruptions in the strata.

During the excavation, witness 1 visited the site on the team's day off. This was brought to the attention of the team and on the following work day, witness 1 made himself available for reinterview. At this time he stated that the team was not digging deep enough, and also pointed out a 5.5×1.75 -m area located within the previously excavated trenches where remains, in his opinion, would most likely be found. He utilized an irrigation position (i.e., a place where water was brought up from an adjacent field) as his point of reference. He stated that this watering spot was near to the location where he had dug up remains in 1984, when he moved them to a location near his house.

Given this information, the team followed up by excavating the 5.5×1.75 -m area indicated (Fig. 4, small rectangle, solid gray line).

This large trench was oriented perpendicular to the trenches already dug and was excavated to the same depth as the other trenches. No remains or other evidence were encountered during this new excavation.

Because witness 1 had mentioned that the team had not dug deep enough, the team then excavated five 50×35 -cm test pits within and near to the new trench location, to a depth of 60 cm (see Figure 6). The team anthropologist observed sterile, undisturbed soil in test pits 1–4; however, disturbed soil was observed in test pit 5 (see arrow in Figure 6 and area labeled **R** in Figure 4). This area of disturbance was the closest location dug to witness 1's point of reference, the watering location.

Test pit 5 was expanded to an area measuring 2.3×2 m (Fig. 7) to a maximum depth of 80 cm. All soil was screened using a wet screen system (Fig. 8).

At last the team recovered dental remains and material evidence such as a dental prosthesis, pieces of jungle boot, an I.D. chain fragment, a sock, and a button. Excavation continued until all disturbed soil was completely removed from the area and wet screened. These items were sent to the subsequent joint forensic review and repatriated in July 2000.





FIGURE 5. Initial trenches in progress.



FIGURE 6. View of new trench, facing south.



FIGURE 7. Test pit expansion.

similar to that made by a mortar. Local people apparently threw items here as they were cleaning up the surrounding fields.

Laboratory Analysis of Remains

To demonstrate just how strong the evidence was for the identification of the MIA in question, an overview of the following lab analysis is presented here. The dental remains recovered



FIGURE 8. Wet screening stations.

consisted of 17 severely eroded, dessicated, and fractured teeth: nine maxillary teeth (nos. 2, 4, 6, 9, 10, 11, 12, 15, and 16) and eight mandibular teeth (nos. 18, 21, 22, 25, 26, 28, and 32). The dental artifact consisted of an acrylic segment from a maxillary denture with denture teeth nos. 7 and 8 attached to it.

The dental remains were digitally radiographed at 60 kVp and 15 MA for 6/60 seconds. These radiographs were compared to a panorex from the MIA's dental file, which was digitally scanned (Fig. 9).

Selected segments of the digitized panorex area are also shown (Fig. 9). The restorative and radiographic pattern of the remains are similar to the antemortem records of the MIA. The MIA's antemortem record reveals that he was missing teeth nos. 7 and 8 (Fig. 10).

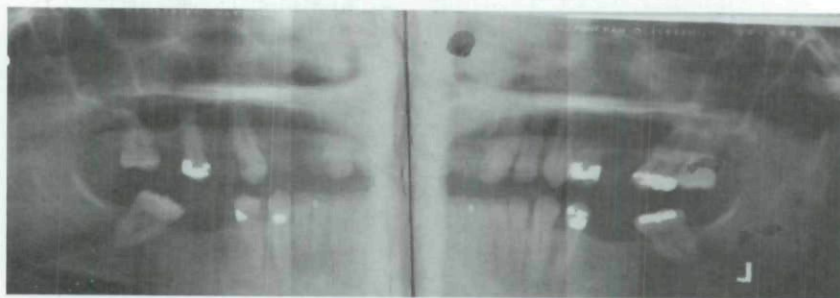
A temporary upper partial was inserted on July 20, 1966. The dental record does not state which teeth the upper partial denture would be prosthetically replacing, but due to the esthetic nature of the case, teeth nos. 7 and 8 were probably included on this temporary denture. The denture teeth (nos. 7 and 8) found on the recovered artifact are consistent with the missing maxillary anterior teeth of the MIA (Fig. 11).

The odontologist's professional opinion stated that "The restorative (operative and prosthetic) and radiographic patterns of the dental remains are similar with the written dental and radiographic records of" this MIA. Therefore the remains were positively identified in September 2000. The remains of the soldier were buried in Arlington National Cemetery in spring 2001.

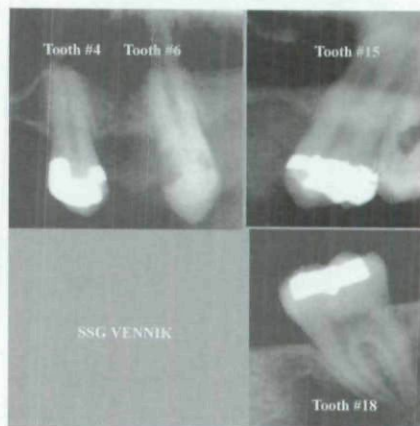
Case Summary

The perseverance of the investigative and recovery teams involved in this case brought a 30-year-old mystery to closure in 2001. Sole reliance on any one line of evidence regarding the disposition of the remains (e.g., eyewitness accounts, witness statements, initial trench results) could have resulted in negative results. It was the application of a combination of unbiased, scientific techniques in the field and laboratory that resulted in a positive identification of an MIA soldier.

Dental analysis: Antemortem information



Antemortem Panorex Films of MIA



Enlarged views of relevant teeth

FIGURE 9. Antemortem panorex and selected views of teeth.

Ante- and Postmortem comparisons

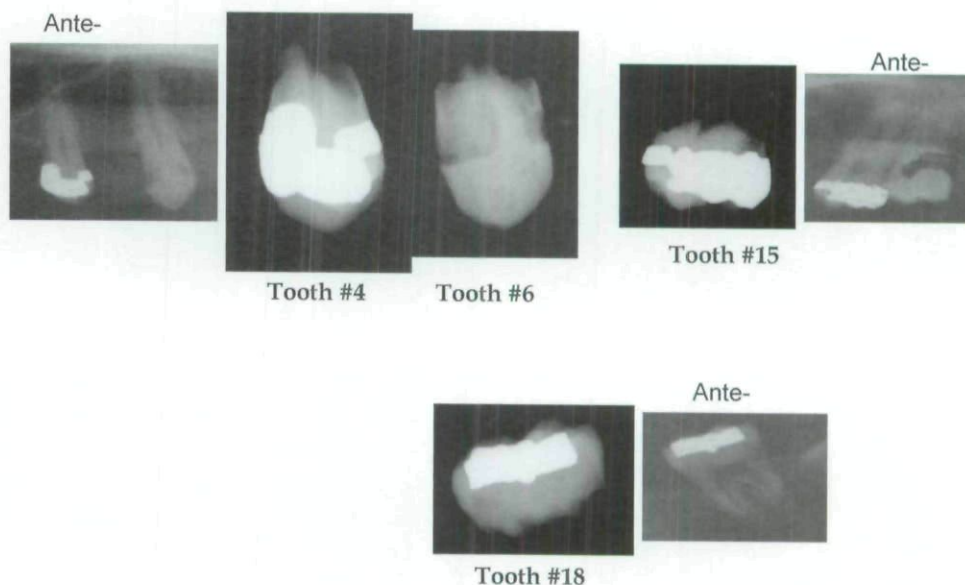


FIGURE 10. Selected antemortem and postmortem comparisons. Antemortem views are labeled as such and postmortem views shown as numbered teeth.

Additional Dental Evidence

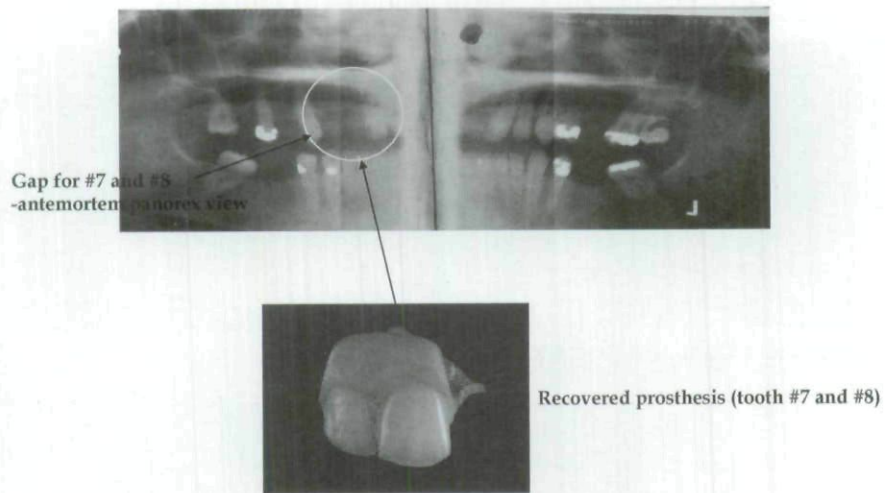


FIGURE 11. Dental artifact and gap where it had been located on antemortem panorex.

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